

# *Day 11 Lab Activity: Sets and Maps*

Submit on **Collab**

Work with your cohort – but everybody must *submit individually!*

Remember to always send **.java files** and not .class files!

## *Lab Activity (Part A): Finding a Good Name*

You've recently gotten a new puppy and you're trying to come up with a good name, but you're having trouble deciding. So you've resorted to pulling names out of a hat. You have **50 choice names** written on individual cards when your best friend brings a book of the top **100 dog names of 2019**. Wanting to choose one of these “hip” names, you decide to fill the hat instead with the top names, but you do not want to re-write any of the names you've already taken the time to list. Write a method that will take in **two sets**, one of **names already on cards** and one containing the **top 100 names**. The method should **return a set of names for the new cards needed**. Note that there could be names that are already on a card that are not in the top dog names.

```
public HashSet<String> names (  
    HashSet<String> cards, HashSet<String> topNames ) {...}
```

## Lab Activity (Part B): Reverse Phonebook

- We have all used **phonebook** (*maybe*) and know that you can look up someone's **number** by searching alphabetically for the person's **name** and find the associated number.
  - For this activity we want you to write a method that takes in a **TreeMap** representation of a phonebook and **returns the reverse phonebook** (*you know the number and look for the name*).
- `public TreeMap<Integer, String> reverseBook  
    (TreeMap<String, Integer> phoneBook)`

# *Using the Starter Java File*

- Open up **Eclipse**.
- Either create a new Java Project, or within an existing one, create a new Class.
- Call this class the same name as the provided file.
- Open up the provided file (not in Eclipse) and copy-and-paste the contents into the newly created Java file on Eclipse
- Save the Eclipse file
- Edit this file – write the bodies of the two methods & test it
- **Save** the file!!
- **Submit** this file (.java) on Collab.